

Remarks

Reconsideration is requested in view of the above amendment and the following remarks. Claims 1 and 8 have been amended. Claims 4-5, 11 and 16-17 are canceled herein without prejudice or disclaimer. Claims 1-3, 6-10 and 12-15 remain pending, with claims 6-7, 10, 12 and 14-15 having been withdrawn from consideration.

I. Claim amendments

The amendments to claim 1 are supported by the original disclosure, for example page 10, line 32 to page 11, line 6.

Claim 8 is amended to provide antecedent basis.

Claims 4-5 and 11 are canceled as a result of the amendments made to claim 1.

Non-elected claims 16-17 directed to a semiconductor device have been canceled.

No new matter has been added.

II. Information Disclosure Statement

Applicants filed an Information Disclosure Statement on June 30, 2005. Applicants request consideration of the cited information and return of initialed Form 1449.

III. Restriction/election

Applicants acknowledge the election of Group I, species I. Claims 4-7, 10-12 and 14-17 have been withdrawn from consideration by the Examiner. Upon allowance of an independent claim, Applicants request examination of at least all pending withdrawn claims that depend upon the allowed independent claim.

IV. Specification objection

The title has been objected to for not being descriptive. The title has been amended to be descriptive.

V. 35 USC 112, second paragraph rejection

Claim 8 is rejected under 35 USC 112, second paragraph, as being indefinite. Claim 8 has been amended by changing "the surface" to "a surface". The claims are definite, and withdrawal of the rejection is requested.

VI. 35 USC 103(a) rejection

Claims 1-3 and 8-9 are rejected under 35 USC 103(a) as being unpatentable over US 5843830 to Graettinger et al. (Graettinger).

In addition, claim 13 is rejected under 35 USC 103(a) as being unpatentable over Graettinger in view of US 6210999 to Gardner et al. (Gardner).

Applicants respectfully traverse these rejections in view of the following.

Claim 1 recites a method for manufacturing a semiconductor device with capacitor elements. In the method, a recess is formed in the second insulating layer at a region above the capacitor element lower electrodes without exposing a surface of the capacitor element lower electrodes before the step of planarizing the second insulating layer. Further, after the planarizing step, a surface portion of the planarized second insulating layer is removed again to expose the capacitor element lower electrodes. Advantages of the claimed method include shortening polishing time, accelerating leveling of steps, improving uniformity of the polishing speed, and suppressing insufficient polishing, peeling of the lower electrodes and the occurrence of scratches, without increasing variations in the recess amount around the capacitor element lower electrodes.

Graettinger discloses covering an inner capacitor plate layer 60 with an oxide layer 80, as shown in Figure 6 (column 4, lines 61-63). Thereafter, as shown in Figure 7, the oxide layer 80 is planarized so as to expose the oxidation barrier layer 70 (column 4, line 66 to column 5, line 4). Then, as shown in Figure 8, the oxidation barrier layer 70 is removed to expose the inner capacitor plate layer 60 (column 5, lines 8-11).

Graettinger does not disclose or teach forming a recess in a second insulating layer before the step of planarizing the second insulating layer. In Graettinger, the alleged recess in the oxide layer 80 shown in Figure 8 is formed by removing the oxidation barrier layer 70 after the oxide

layer 80 is planarized. Further, the alleged recess in Graettinger is formed in the oxide layer 80 while exposing the lower capacitor plate 60. Therefore, Graettinger does not disclose forming a recess without exposing a surface of a capacitor element lower electrode.

For at least these reasons, claim 1 is patentable over Graettinger. Claims 2-3, 8-9 and 13 depend from claim 1 and are patentable along with claim 1 and need not be separately distinguished. Applicants do not concede the correctness of the rejections to claims 2-3, 8-9 and 13.

VII. Conclusion

Favorable reconsideration in the form of a Notice of Allowance is requested. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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